

Name: _____ Date: _____

Period: _____

Geometry CRT Review Versionc 3

1. What is the converse of "If it is sunny, then I will go for a drive?"
 - a. If it is sunny, then I will not go for a drive.
 - b. If it is not sunny, then I will not go for a drive.
 - c. If I go for a drive, then it is sunny.
 - d. If I do not go for a drive, then it is not sunny.
2. Which conditional statement is in correct if-then form for "Trapezoids have only two parallel sides."?
 - a. If a figure is a trapezoid, then it does not have only two parallel sides.
 - b. If a figure has only two parallel sides, then it is a trapezoid.
 - c. If a figure has only two parallel sides, then it is not a trapezoid.
 - d. If a figure is a trapezoid, then it will have only two parallel sides.

3. **Statement 1: If Lu studies, then Lu is learning.**

Statement 2: Lu studies.

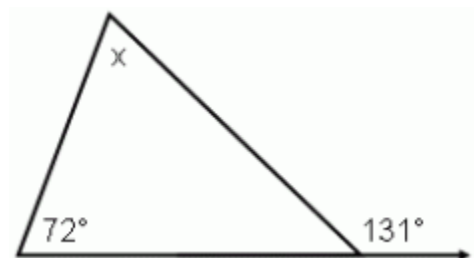
Which of the following is a valid conclusion based on both of the statements above?

- a. Lu is not learning.
 - b. Lu is learning.
 - c. If Lu learns, then Lu is studying.
 - d. If Lu is not studying, then Lu is not learning.
4. **After measuring several pairs of vertical angles, Amy said "If two angles are congruent, then they are vertical angles."**
What can be said about both the converse and inverse of Amy's statement?
 - a. The converse and inverse are both true.
 - b. The converse is true and the inverse is false.
 - c. The inverse is true and the converse is false.
 - d. The converse and inverse are both false.

5. **If the diagonals of a quadrilateral bisect each other, then the quadrilateral is a rhombus.**
Which of the following is a counterexample that shows that the statement above is false?

- a. a rhombus whose diagonals bisect each other
 - b. a rhombus whose diagonals do not bisect each other
 - c. a quadrilateral that is not a rhombus and whose diagonals do not bisect each other
 - d. a quadrilateral that is not a rhombus and whose diagonals bisect each other

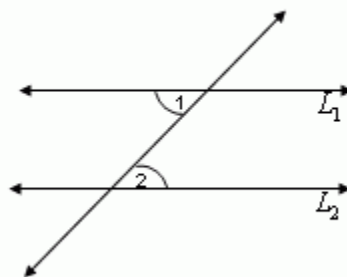
6. Given the figure below, what is the value of x ?



- a. 18°
 - b. 49°
 - c. 59°
 - d. 131°

- 7.

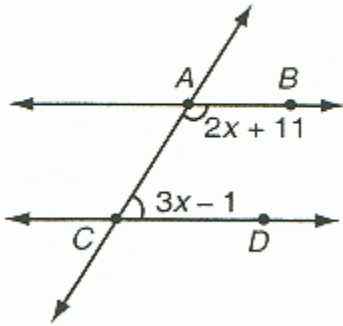
Given: $L_1 \parallel L_2$. What is the reason for the congruence $\angle 1 \cong \angle 2$?



- a. Vertical angles are congruent
 - b. Corresponding angles are congruent
 - c. Alternate interior angles are congruent
 - d. Alternate exterior angles are congruent

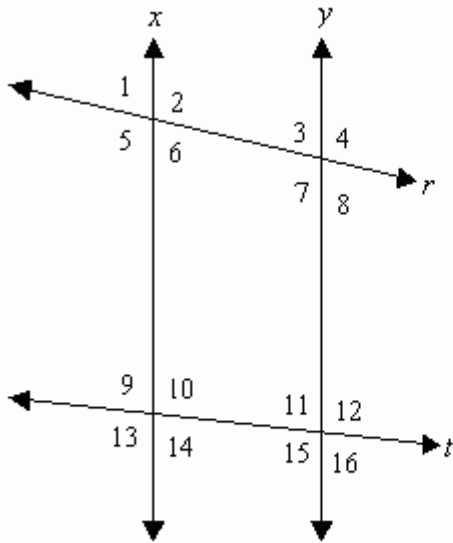
8.

Given: $\overline{AB} \parallel \overline{CD}$. What is the value of x ?



- a. 38 b. 34 c. 16 d. 12

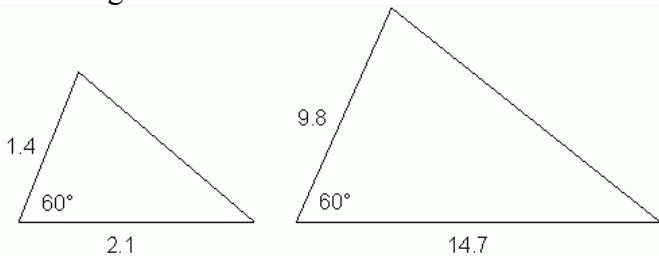
9. Given the following sets of lines,



What information would a student need to know to prove $x \parallel y$?

- a. $\angle 3 \cong \angle 8$ b. $\angle 6 \cong \angle 9$
c. $\angle 10 \cong \angle 11$ d. $\angle 12 \cong \angle 13$

10. Which postulate or theorem would prove these triangles to be similar?



- a. AS b. SSS c. SAS d. AA

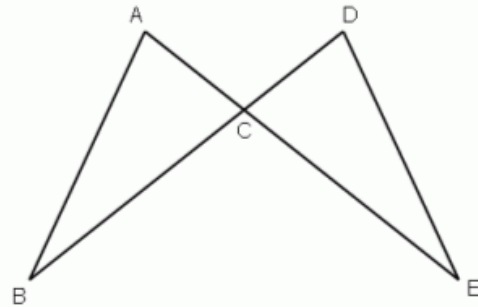
11. A football field is 360 feet by 45 feet. How long is the walk from one corner diagonally to the opposite corner?

- a. 362.8 feet. b. 762.3 feet.
c. 405 feet. d. 810 feet.

12.

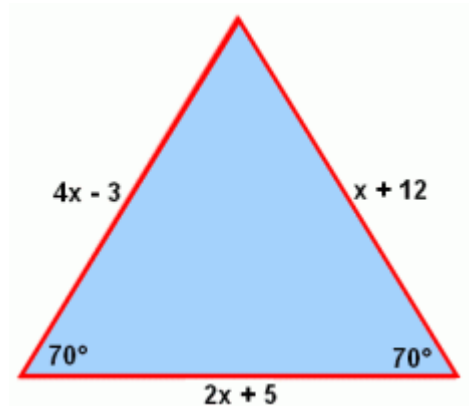
Given: $\angle B \cong \angle E$

What additional information is needed to prove $\triangle ABC \cong \triangle DEC$ by ASA?



- a. $\overline{BC} \cong \overline{CE}$ b. $\overline{AB} \cong \overline{DE}$
c. $\angle A \cong \angle D$ d. $\overline{AC} \cong \overline{DC}$

13. Given the following triangle, what is the value of x ?



- a. 7 b. 6 c. 5 d. 4

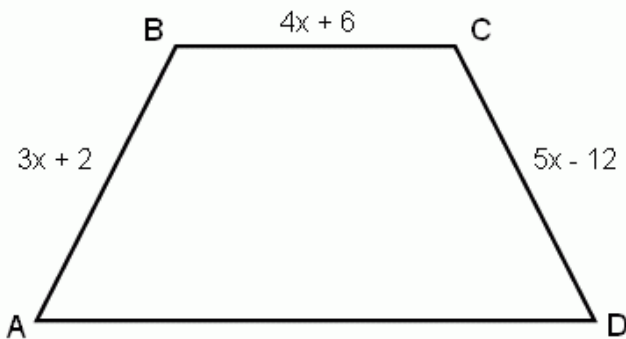
14. Which of the following statements is **always** true?
- Opposite sides of a kite are congruent.
 - Consecutive angles of a parallelogram are congruent.
 - The diagonals of an isosceles trapezoid are congruent.
 - The diagonals of a rectangle bisect opposite angles.

15. Home plate in baseball is a pentagon. The plate has three right angles and two other angles that are congruent. What is the measure of each of those two angles?



- a. 45° b. 90° c. 125° d. 135°

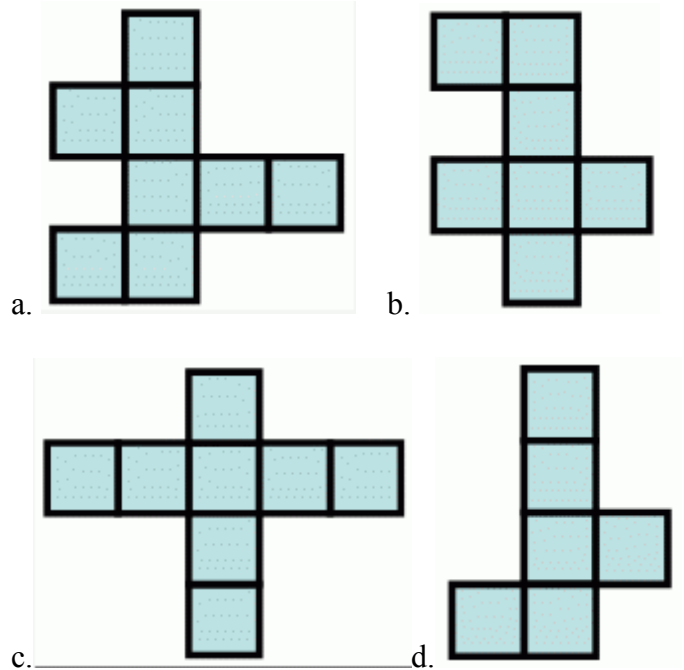
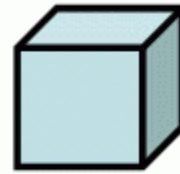
16. Given isosceles trapezoid ABCD.



What is the length of \overline{BC} ?

- a. 7 b. 34 c. 23 d. 18

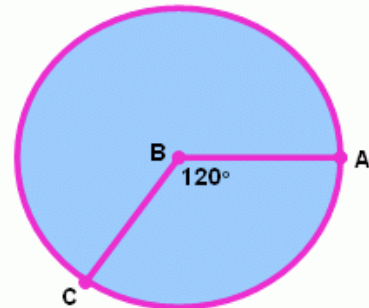
17. Which of the following is a net for the given cube?



18. Which quadrilateral has **exactly one** diagonal that is a line of symmetry?

- a. square b. kite
c. parallelogram d. trapezoid

- 19.

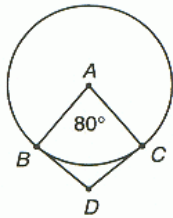


Given $\odot B$, what is the measure of \widehat{AC} ?

- a. 30 degrees b. 60 degrees
c. 120 degrees d. 240 degrees

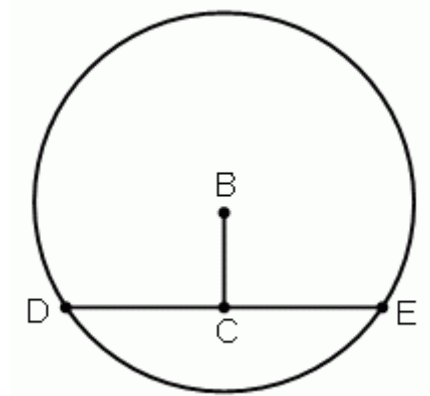
20.

Given for circle A: $m\angle BAC = 80^\circ$ and \overline{BD} and \overline{DC} are tangents to the circle. What is the measure of $\angle BDC$?



- a. 100° b. 90° c. 80° d. 40°

21. Given circle B, if $DE = 24$ inches and $BC = 9$ inches, what is the length of the radius of circle B?



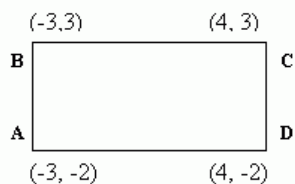
- a. 33 in. b. 21 in. c. 15 in. d. 13 in.

22. What is the equation of the line passing through $(-2, 3)$, and parallel to line CD, given $C(-4, 5)$ and $D(2, 7)$?

- a. $3x - y = 3$ b. $3x - y = -9$
c. $x - 3y = -11$ d. $x + 3y = -1$

23.

Using the distance formula, what is the length of \overline{BD} to the nearest tenth?



- a. 4.3 units b. 4.9 units
c. 6.8 units d. 8.6 units

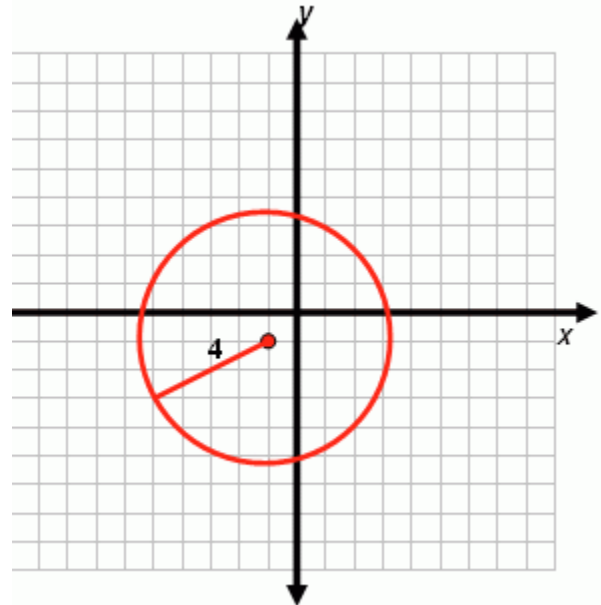
24. Points A, B, and C form a triangle. If Morgan was to use the distance formula to find the lengths of the sides, how would she classify triangle ABC?

- a. scalene b. right
c. isosceles d. equilateral

25. Find the equation of the circle with center $(-1, 4)$ and radius of 4.

- a. $(x + 1)^2 + (y + 4)^2 = 16$
b. $(x - 1)^2 + (y + 4)^2 = 4$
c. $(x + 1)^2 + (y - 4)^2 = 16$
d. $(x - 1)^2 - (y + 4)^2 = 4$

26. What is the equation of the circle?

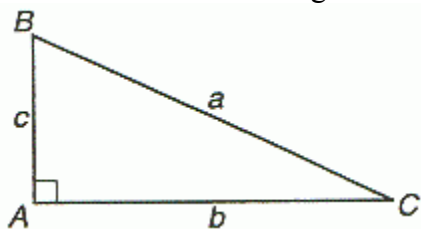


- a. $(x - 1)^2 + (y - 1)^2 = 4$
b. $(x - 1)^2 + (y - 1)^2 = 16$
c. $(x + 1)^2 + (y + 1)^2 = 4$
d. $(x + 1)^2 + (y + 1)^2 = 16$

27. Given the following triangle, what is the value of x ?

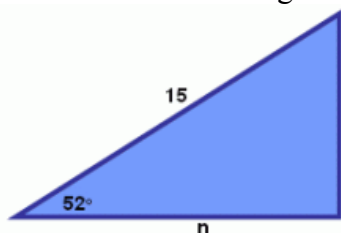
- a. $16\sqrt{3}$ b. $16\sqrt{2}$ c. 32 d. $32\sqrt{2}$

28. Triangle ABC below is scalene. Which statement is **true** for this triangle?



- a. $\tan B = \tan C$ b. $\sin B = \sin C$
c. $\sin A = \cos B$ d. $\cos C = \sin B$

29. Given the following triangle,



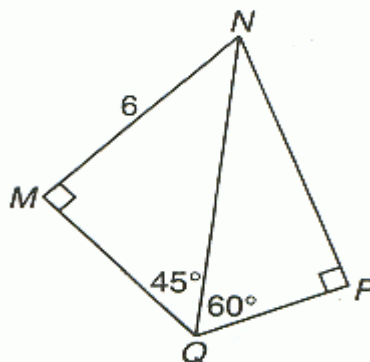
which of the following equations should be used to find the value of n ?

- a. $\tan 52^\circ = \frac{15}{n}$ b. $\cos 52^\circ = \frac{15}{n}$
c. $\sin 52^\circ = \frac{n}{15}$ d. $\cos 52^\circ = \frac{n}{15}$

30. The vertex of an isosceles triangle measures 120° . The altitude to the base is 5 units long. How long is a leg of the triangle?

- a. 5 b. $5\sqrt{2}$ c. $5\sqrt{3}$ d. 10

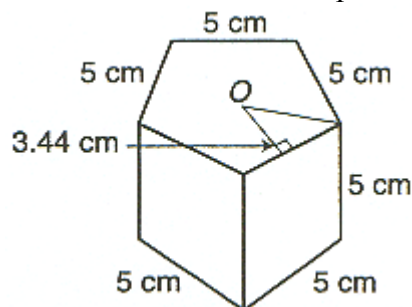
31. Given the following figure,



How long is \overline{NP} ?

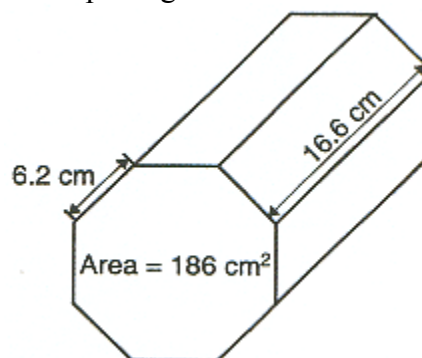
- a. $3\sqrt{2}$ b. $3\sqrt{6}$ c. 6 d. $6\sqrt{3}$

32. Point O is the center of the base of the prism. What is the volume of the prism?



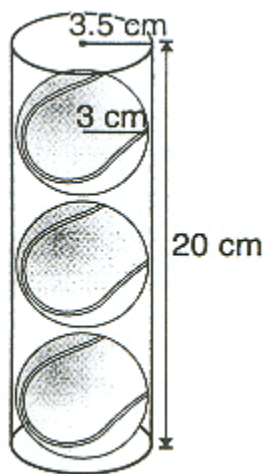
- a. 156 cm^3 b. 215 cm^3
c. 250 cm^3 d. 350 cm^3

33. The packaging for a new perfume is in the shape of the octagonal prism. Which equation shows the correct way to determine the surface area of this package?



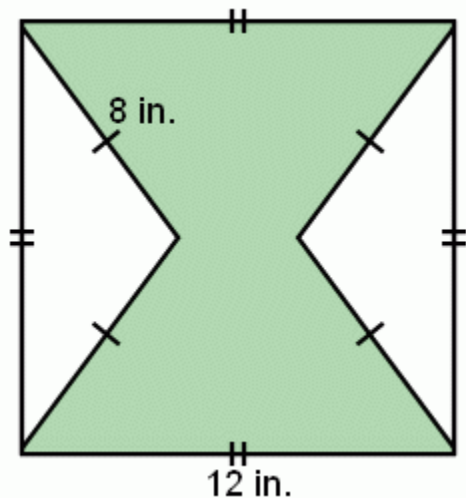
- a. $SA = (186)(16.6)$
b. $SA = 2(6.2)(16.6)$
c. $SA = 2(186) + (6.2)(16.6)$
d. $SA = 2(186) + 8(6.2)(16.6)$

34. Which of the following is the best estimate of the packing efficiency of the tennis ball can? (Packing efficiency is the ratio of the volume of the tennis balls to the volume of the can, expressed as a percent.)



- a. 30% b. 45% c. 55% d. 70%

35. What is the approximate area of the shaded region?



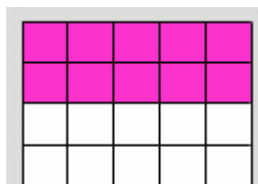
- a. 63.5 in.^2 b. 72.0 in.^2
c. 80.5 in.^2 d. 96.0 in.^2

36. You are to color areas in the figure below to represent the probability of a person being killed in one of these disasters. How many squares would you color to represent the probability that a person was killed in the in Yungay, Peru?

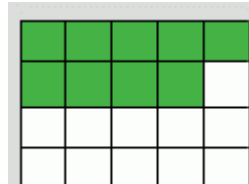
The top 10 worst Avalanches and Landslides of the 20th century are listed below:

Location	Incident	Date	Est. # killed
1. Yungay, Peru	Landslide	May 31, 1970	17,500
2. Italian Alps	Avalanche	Dec. 13, 1916	10,000
3. Huaras, Peru	Avalanche	Dec 13, 1941	5,000
4. Nevada Huascarán, Peru	Avalanche	Jan. 10, 1962	3,500
5. Medellín, Columbia	Landslide	Sept. 27, 1987	683
6. Chugur, Peru	Avalanche	Mar. 19, 1971	600
7. Rio de Janeiro, Brazil	Landslide	Jan. 11, 1966	550
8. Northern Assam, India	Landslide	Feb. 15, 1949	500
9. Grand Riviere du Nord, Haiti	Landslide	Nov. 13/14, 1963	500
10. Blons, Austria	Avalanche	Jan. 11, 1954	411

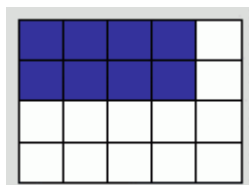
"The top 10 of Everything 1998" by Russell As...



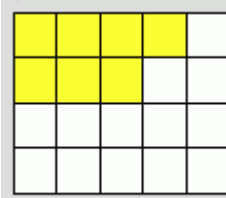
a. 10 squares



b. 9 squares



c. 8 squares

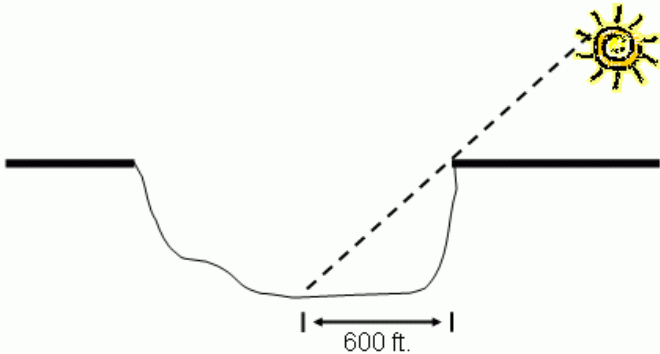


d. 7 squares

37. Televisions are classified by the length of the diagonal of their screen, so a 19-inch television has a screen whose diagonal length is 19 inches. If a 19-inch television has a screen with a height of 12 inches, what is the width (to the nearest inch) of the screen?

- a. 7 inches b. 22 inches
c. 15 inches d. 14 inches

38. Scientists can estimate the depth of craters on the moon by studying the lengths of their shadows in the craters. What is the depth of a crater if the shadow is estimated to be 600 ft. long when the angle of elevation of the sun is 42 degrees?



- a. 401 ft. b. 446 ft. c. 540 ft. d. 587 ft.
39. John walked 3 blocks north, 4 blocks east, then 4 more blocks north. What is the shortest distance from John's starting point to his ending point?
- a. 7.4 blocks b. 8.1 blocks
c. 8.5 blocks d. 8.8 blocks

Geometry CRT Review Version 1 Key

1. c
2. d
3. b
4. a
5. d
6. c
7. c
8. b
9. d
10. c
11. a
12. a
13. c
14. c
15. d
16. b
17. d
18. b
19. c
20. a
21. c
22. c
23. d
24. c
25. c
26. d
27. c
28. d
29. d
30. d
31. b
32. b
33. d
34. b
35. c
36. b
37. c
38. c
39. b